

Remarks

I. Status of the claims

Claims 1-20 were pending.

Claim 11 has been rewritten in independent form.

II. Claim rejections under 35 U.S.C. § 103(a)

A. Claims 1-12 and 15-20

The Examiner has rejected claims 1-12 and 15-20 under 35 U.S.C. § 103(a) over Morrison ("New Product Forecasting: Part III - Translating Penetration Estimates Into Long Run Sales") in view of Radas ("Seasonal Marketing And Time New Product Introductions").

Morrison discloses a diffusion model based sales forecasting method that involves the following steps:

1. obtain historical sales data of an older product likely to mimic the life cycle of a new product;
2. run a regression on the historical sales data to obtain estimates of the coefficient of innovation (p) and the coefficient of imitation (q) of the Bass product diffusion model;
3. determine an estimate of long run market penetration for a new product;
4. translate the market penetration estimate into an estimate of the lifetime expected sales of the new product;
5. input the estimates for the coefficient of innovation, the coefficient of imitation, and the lifetime expected sales into the Bass forecast equation, and iteratively calculate the Bass forecast equation for each time period to determine non-cumulative unit sales forecast for the new product.

Radas discloses a method for adding known seasonal patterns to any sales model without changing the underlying sales model. In accordance with this method, a known seasonal pattern is used to transform the time of the underlying sales model such that the sales specified by the underlying sales model are shifted to earlier or later periods to reflect the known seasonal patterns.

1. Claims 1-10

Independent claim 1 has been amended and now recites:

1. A method of forecasting demand for a product, comprising:

obtaining a product life cycle template comprising template parameter values each individually controlling a respective aspect of a respective one of a growth phase, a maturity phase, and a decline phase of a template demand profile;

producing an initial demand forecast comprising demand values for the product over a product life cycle, wherein the producing comprises modifying one or more of the demand profile parameter values of the product life cycle template;

determining one or more impact profiles each of which comprises one or more impact values, wherein each of the impact values specifies a respective impact of a respective set of one or more events on the initial demand forecast during a respective period of the product life cycle; and

generating an event-adjusted demand forecast for the product, wherein the generating comprises convolving the impact values of the respective periods of the one or more impact profiles with the demand values of corresponding periods of the initial demand forecast.

The "Obtaining" Clause

Morrison does not teach or suggest "obtaining a product life cycle template comprising template parameter values each individually controlling a respective aspect of a respective one of a growth phase, a maturity phase, and a decline phase of a template demand profile," as now recited in claim 1. The values of the coefficients of innovation and imitation in the Bass diffusion model do not constitute the template parameter values recited in claim 1 because they do not individually control a respective aspect of a respective one of a growth phase, a maturity phase, and a decline phase of a template demand profile over time. Instead, both of these coefficient values collectively control aspects of all phases of the non-cumulative unit sales profile by serving as multiplicative factors in an equation that must be evaluated iteratively in order to determine the sales forecast for a product. Thus, none of

these coefficient values individually controls a respective aspect of a respective one of a growth phase, a maturity phase, and a decline phase of the non-cumulative sale profile.

Radas also does not teach or suggest the obtaining clause now recited in claim 1. Instead, Radas merely assumes that the underlying sales model is "specified correctly" (page 298, last sentence of second full ¶).

Thus, since neither Morrison nor Radas teaches or suggests the obtaining clause recited in claim 1, no combination of these references possibly could teach or suggest this feature of claim 1. For at least this reason, the rejection of claim 1 under 35 U.S.C. § 103(a) over Morrison and Radas should be withdrawn.

The "Producing" Clause

Morrison does not teach or suggest "producing an initial demand forecast comprising demand values for the product over a product life cycle, wherein the producing comprises modifying one or more of the demand profile parameter values of the product life cycle template," as now recited in claim 1. In accordance with Morrison's approach, the values of the coefficients of innovation and imitation that are estimated from the historical sales data of the older product are not modified to produce the non-cumulative sales forecast for the new product. To the contrary, these same coefficient values are used to produce the non-cumulative sales forecast for the new product.

Radas also does not teach or suggest the producing clause now recited in claim 1. Instead, Radas merely assumes that the underlying sales model is "specified correctly" (page 298, last sentence of second full ¶).

Thus, since neither Morrison nor Radas teaches or suggests the producing clause recited in claim 1, no combination of these references possibly could teach or suggest this feature of claim 1. For at least this additional reason, the rejection of claim 1 under 35 U.S.C. § 103(a) over Morrison and Radas should be withdrawn.

The "Generating" Clause

Morrison does not teach or suggest "generating an event-adjusted demand forecast for the product, wherein the generating comprises convolving the impact values of the respective periods of the one or more impact profiles with the demand values of corresponding periods of the initial demand forecast," as now recited in claim 1.

Radas also does not teach or suggest the generating clause now recited in claim 1. In particular, Radas does not convolve the values of the respective periods of either the seasonality pattern $g(t)$ or the transformed time $f(t)$ with the demand values of corresponding periods of the initial demand forecast. Instead, Radas transforms the time of the underlying sales model to capture the known seasonality patterns (see page 298, first column). The time transformation process, however, does not involve convolving the values of the respective periods of either the seasonality pattern $g(t)$ or the transformed time $f(t)$ with the demand values of corresponding periods of the initial demand forecast. Instead, it involves accumulating the time-shifted sales specified by the underlying sales model.

Thus, since neither Morrison nor Radas teaches or suggests the generating clause recited in claim 1, no combination of these references possibly could teach or suggest this feature of claim 1. For at least this additional reason, the rejection of claim 1 under 35 U.S.C. § 103(a) over Morrison and Radas should be withdrawn.

Each of claims 2-10 incorporates the features of independent claim 1 and therefore is patentable over Morrison and Radas for at least the same reasons explained above.

2. Claims 11-16

Claim 11 has been rewritten in independent form.

In his rejection of claim 11, the Examiner has stated that:

Regarding Claim 11, Morrison teaches adjusting a demand forecast based on inventory (page 4, inventory is assumed to have no affect, however this implies that it could have an effect since Morrison acknowledges the model is simplistic). Morrison also teaches that recent sales (i.e. sell through impact on demand) and that market conditions impact demand.

Morrison does not teach using a measure of channel inventory to generate an inventory-adjusted demand forecast as per:

generating an inventory- adjusted demand forecast based upon a convolution of the event-adjusted demand forecast with a measure of channel inventory and sell-through impact on product demand.

However, Official Notice is taken that it is old and well known in the art for channel inventory to have an impact on demand, since availability of a product in certain sales channels is

known to help drive sales. Accounting for channel inventory in a sales forecast better accounts for the impact of inventory level on sales.

It would have been obvious to one of ordinary skill in the art to modify the combined teachings of Morrison and Radas to include the step of the adjusting demand based on channel inventory because it would provide a better, more improved forecast by taking into account the known effect that channel sales has on inventory.

This reasoning, however, does not establish a proper *prima facie* case of obviousness under 35 U.S.C. § 103(a). In particular, the Examiner has misread claim 11 as reciting “adjusting demand based on channel inventory,” whereas claim 11 actually recites in pertinent part “generating an inventory-adjusted demand forecast based upon a convolution of the event-adjusted demand forecast with a measure of channel inventory and sell-through impact on product demand” (emphasis added). The Examiner has not shown that Morrison, Radas, or the unsubstantiated “well known” prior art teaches or suggests anything about “a measure of channel inventory and sell-through impact on product demand.” Therefore, on its face, the Examiner’s rejection of claim 11 does not establish a proper *prima facie* case of obviousness under 35 U.S.C. § 103(a) (see MPEP § 706.02(j)).

Furthermore, the Examiner’s statement that “Morrison teaches adjusting a demand forecast based on inventory (page 4, inventory is assumed to have no affect, however this implies that it could have an effect since Morrison acknowledges the model is simplistic)” is unreasonable. In fact, the word “inventory” does not appear on page 4 or on any other page of the Morrison reference. The Examiner unreasonably has inferred that “Morrison teaches adjusting a demand forecast based on inventory” from the mere fact that “Morrison acknowledges the model is simplistic.” A person skilled in the art at the time the invention was made would not have made this inference because one cannot infer a teaching or suggestion where none exists.

As acknowledged by the Examiner, neither Morrison nor Radas teaches or suggests “generating an inventory-adjusted demand forecast based upon a convolution of the event-adjusted demand forecast with a measure of channel inventory and sell-through impact on product demand.” The subject matter that is relied on by the Examiner in his Official Notice merely is that channel inventory has an impact on demand. This unsubstantiated “well known” prior art, however, does not provide any teaching or suggestion whatsoever regarding how to account for channel inventory in a sales forecast, much less anything that would have

led one skilled in the art at the time the invention was made to convolve an event-adjusted demand forecast with a measure of channel inventory, as proposed by the Examiner. For this reason, the Examiner's reliance on well-known knowledge in ¶ 35 of the final Office action amounts to no more than the impermissible "obvious to try" rationale for finding obviousness, which is not the proper standard for rejecting a claim (see, e.g., MPEP § 2145.X.B).

Moreover, the Examiner has stated that "Accounting for channel inventory in a sales forecast better accounts for the impact of inventory level on sales." The Examiner has inferred this circular conclusion from the subject matter of his Official Notice statement (i.e., "it is old and well known in the art for channel inventory to have an impact on demand, since availability of a product in certain sales channels is known to help drive sales"). Although the availability of a product in certain sales channels is known to help drive sales by virtue of the fact that product cannot be sold unless it is in the sales channel, there is no reasonable basis for inferring that the mere availability of a product in certain sales channels stimulates demand as assumed by the Examiner. If the Examiner persists with these rejections, he is requested to cite other art in support of this assumption. Alternatively, if the Examiner is aware of facts within his personal knowledge that support this assumption, the Examiner is requested to provide an affidavit in accordance with 37 CFR § 1.104(d)(2). Otherwise, the Examiner's rejection of claim 11 on this basis should be withdrawn for at least this reason.¹

Each of claims 12-16 incorporates the features of independent claim 11 and therefore is patentable over Morrison and Radas for at least the same reasons explained above.

3. Claim 17

Independent claim 17 recites features that essentially track the pertinent features of independent claim 1 and therefore is patentable over Morrison and Radas for at least the same reasons explained above in connection with independent claim 1.

¹ It is noted that the Smith reference cited by the Examiner in the rejection of claims 13 and 14 does not support the Examiner's assumption. In particular, although Smith states that "None of the above analyses includes seasonal variations in sales rate or the influence of inventory level on demand, which are key features of our model and are important issues in many retail applications" (page 286, col. 2, lines 1-5), this statement merely refers to the inventory effect on the impact of demand on the sales rate (see page 290, equation (12)).

4. Claims 18-20

Independent claim 18 recites features that essentially track the pertinent features of independent claim 1 and therefore is patentable over Morrison and Radas for at least the same reasons explained above in connection with independent claim 1.

Each of claims 19 and 20 incorporates the features of independent claim 18 and therefore is patentable over Morrison and Radas for at least the same reasons explained above.

B. Claims 13 and 14

The Examiner has rejected claims 13 and 14 under 35 U.S.C. § 103(a) over Morrison in view of Radas and Smith ("Clearance Pricing and Inventory Policies for Retail Chains").

Each of claims 13 and 14 incorporates the features of independent claim 11. Smith does not make-up for the failure of Morrison and Radas to teach or suggest the features of claim 11 discussed above. Therefore, claims 13 and 14 are patentable over Morrison, Radas, and Smith for at least the same reasons explained above. These claims also are patentable over the cited references for the following additional reasons.

In his rejection of claims 13 and 14, the Examiner has stated that:

Smith teaches comparing the inventory (i.e. aggregate channel weeks of supply) and an estimate of the inventory target (i.e. aggregate channel weeks of supply target) enables inventory to be adjusted so that its effect on sales is optimized (see also page 293 equation 26 in column 1).

Page 293, equation (26) does not support the Examiner's assertion that Smith teaches "computing a measure comparing the aggregate channel weeks of supply estimate and an estimate of an aggregate weeks of supply target for the channel," as required by claims 13 and 14. Equation (26) is an expression for the inventory effect on the sales rate (see equation (12) on page 290). In equation (26), the inventory effect $y(I)$ is a function of the current inventory level I , the threshold level f_0 , and a sensitivity parameter μ . In accordance with equation (26), $y(I)$ is neither a function of an aggregate channel weeks of supply estimate nor a function of an estimate of an aggregate weeks of supply target for the channel.

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For at least these additional reasons, the Examiner's rejection of claims 13 and 14 over Morrison, Radas, and Smith should be withdrawn.

III. Conclusion

For the reasons explained above, all of the pending claims are now in condition for allowance and should be allowed.

Charge any excess fees or apply any credits to Deposit Account No. 08-2025.

Respectfully submitted,

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